

Serial No. 10/796,681

Art Unit: 1713

Amendments to the Claims

1. (Currently Amended) A coating material ~~having a viscosity of less than 1000 mPas within a temperature range of 0 to 90°C and comprising:~~
 - a. 40 to 90 wt.% of at least one oligomeric substance selected from the group consisting of epoxy (meth)acrylates, polyester (meth)acrylates, polyether (meth)acrylates, and polyurethane (meth)acrylates, wherein said oligomeric substance is linear or branched and contains at least two unsaturated double bonds;
 - b. 5 to 60 wt.% of at least one low molecular weight (meth)acrylate selected from the group consisting of monofunctional, difunctional, trifunctional and polyfunctional (meth)acrylate compounds;
 - c. 0.1 to 20 wt.% of at least one (meth)acrylate compound different from a and b containing one or more acidic groups; and
 - d. 0.1 to 20 wt.% of at least one auxiliary substance selected from the group consisting of adhesion promoters different from c, flow-control agents, defoaming agents, light stabilizers, dyes, pigments, biocides, fillers and photoinitiators;wherein 2.0 to 20 wt.%, based upon total coating material, of the monofunctional, difunctional, trifunctional and polyfunctional (meth)acrylate compounds are linear or branched.
2. (Currently Amended) A coating material according to claim 1 wherein a, b, c, and d are selected and homogenized together such that the coating material has having a viscosity within a temperature range of 15°C to 70°C of less than 300 mPas.
3. (Original) A coating material according to claim 1 additionally comprising up to 20 wt.% of at least one silane selected from the group consisting of dialkoxysilanes and trialkoxysilanes wherein said at least one silane contains at least one functional

Serial No. 10/796,681

Art Unit: 1713

group other than alkoxy groups.

4. (Original) A coating material according to claim 1, wherein component c) comprises at least one methacrylate compound selected from the group consisting of phosphoric (meth)acrylate compounds and phosphonic (meth)acrylate compounds.
5. (Original) A coating material according to claim 1 comprising at least one dye or pigment.
6. (Original) A coating material according to claim 1 comprising at least one biocide.
7. (Currently Amended) A coating material according to claim 1 comprising at least one pigment selected from the group consisting of highly disperse silica and highly disperse ~~aluminium~~ aluminum oxide.
8. – 27. (Cancelled)
28. (Currently Amended) A coating material ~~having a viscosity of less than 300 mPas within a temperature range of 15 to 70°C and~~ comprising:
 - a. 45 to 85 wt.% of at least one oligomeric substance having at least two unsaturated double bonds selected from the group consisting of epoxy (meth)acrylates, polyester (meth)acrylates, polyether (meth)acrylates, and polyurethane (meth)acrylates, wherein said oligomeric substance is linear or branched;
 - b. 10 to 60 wt.% of at least one (meth)acrylate selected from the group consisting of monofunctional, difunctional, trifunctional and polyfunctional (meth)acrylate compounds;
 - c. 0.5 to 10 wt.% of at least one (meth)acrylate compound containing one or

Serial No. 10/796,681

Art Unit: 1713

- more phosphoric or carboxyl acidic functional groups;
- d. 0.5 to 15 wt.% of at least one radical photoinitiator; and
- e. up to 20 wt.% of at least one silane selected from the group consisting of dialkoxysilanes and trialkoxysilanes wherein said at least one silane contains at least one functional group other than alkoxy groups;
wherein 2.0 to 20 wt.%, based upon total coating material, of the monofunctional, difunctional, trifunctional and polyfunctional (meth)acrylate compounds are linear or branched.
29. (Cancelled)
30. (Cancelled)
31. (New) A coating material according to claim 28, wherein component c) comprises at least one methacrylate compound selected from the group consisting of phosphoric (meth)acrylate compounds and phosphonic (meth)acrylate compounds.
32. (New) A coating material according to claim 28 additionally comprising up to 20 wt.% of at least one silane selected from the group consisting of dialkoxysilanes and trialkoxysilanes wherein said at least one silane contains at least one functional group other than alkoxy groups.
33. (New) A coating material according to claim 28 comprising at least one pigment selected from the group consisting of highly disperse aluminum oxide, titanium oxide and barium sulfate.
34. (Currently Amended) A coating material according to claim 33 wherein said pigment is white, colorless or transparent.

Serial No. 10/796,681

Art Unit: 1713

35.(New) A coating material according to claim 28 comprising at least one antibacterial or biocidal component.

36.(New) A high-energy radiation curable coating material for metal surfaces comprising:

- a. 40 to 90 wt.% of a component of at least one oligomeric substance selected from the group consisting of aromatic epoxy (meth)acrylates, and optionally polyester (meth)acrylates, polyether (meth)acrylates, and polyurethane (meth)acrylates, wherein said oligomeric substance contains at least two unsaturated double bonds;
- b. 5 to 60 wt.% of a component of at least one low molecular weight (meth)acrylate selected from the group consisting of monofunctional, difunctional, trifunctional and polyfunctional (meth)acrylate compounds different from a;
- c. 0.1 to 20 wt.% of a component of at least one (meth)acrylate compound different from a and b containing one or more acidic groups; and
- d. 0.1 to 20 wt.% of a component of at least one auxiliary substance selected from the group consisting of adhesion promoters different from c, flow-control agents, defoaming agents, light stabilizers, dyes, pigments, biocides, fillers and photoinitiators;

wherein said components are selected and homogenized such that the coating material has a viscosity of less than 1000 mPas within a temperature range of 0 to 90°C and the coating material deposited on metal surfaces cross-links to become a formable surface coating upon curing.

37.(New) A coating material according to claim 34, wherein component a) comprises 34.3 to 80.8 wt.%, based on total coating material, of aromatic epoxy

Serial No. 10/796,681

Art Unit: 1713

(meth)acrylates.

38. (New) A coating material according to claim 34, wherein component b) comprises 2.0 to 20 wt.%, based upon total coating material, of linear or branched monofunctional, difunctional, trifunctional and polyfunctional (meth)acrylate compounds.